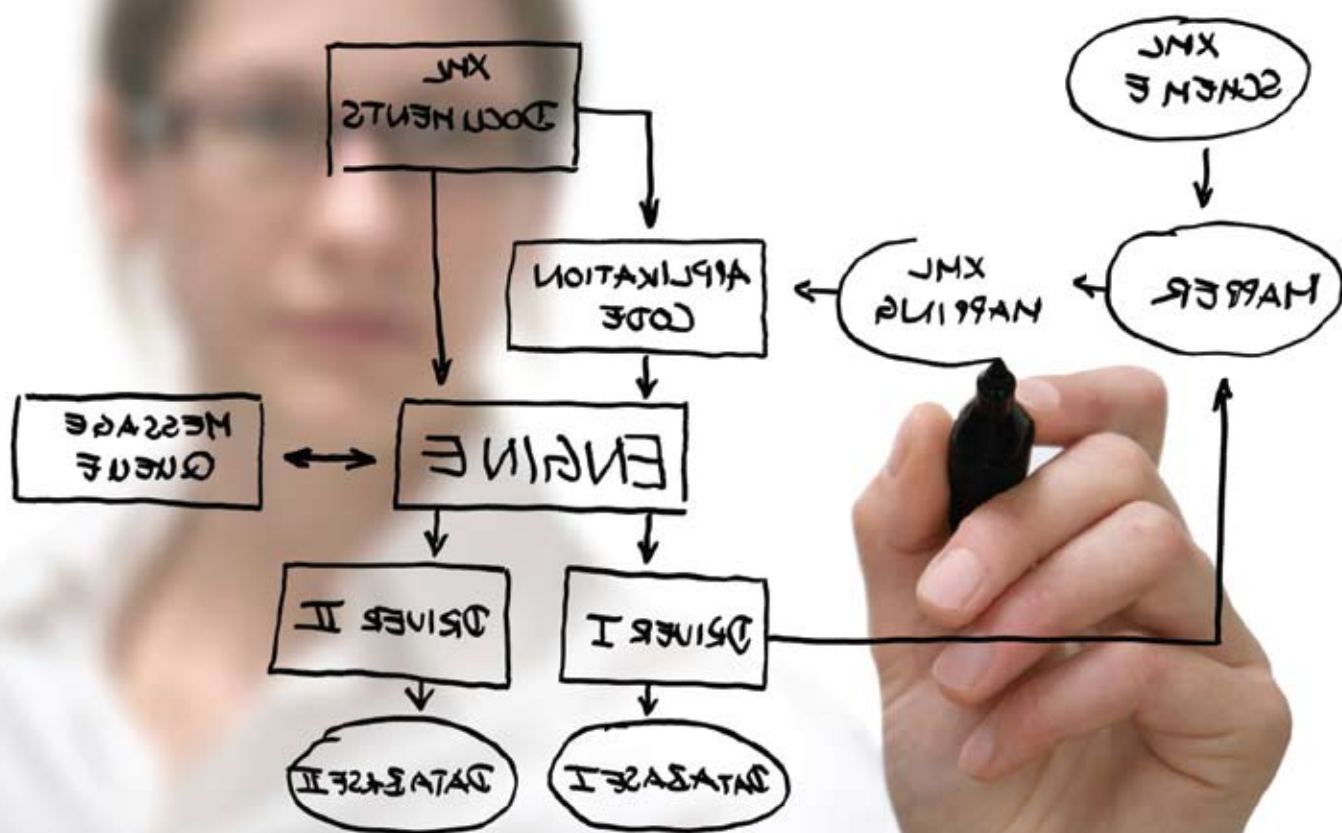


# Computer Programmers: *They're Everywhere*



*This occupation will experience little or no employment growth, but there will be a moderate volume of annual job openings. The need for replacements is projected to make up the majority of job openings.*


Daily, our lives are directly impacted by computer programmers, those folks who write the code that tells computers what to do. Computer programmers have made it possible to easily download movies and free music, pay our bills, work from home, and conduct our lives via email. Do you know that computer-assisted psychotherapy has been found to be as effective as face-to-face therapy in the treatment of depression? Do you know that one of the few hot-sellers in these down economic times are video games? Who can be a Guitar Hero™ without thanking a computer programmer for being able to living out their fantasy? From creating our own greeting cards and mailing them with a stamp made from a personal photo to uploading family photos and having them printed at the pharmacy across town, it is difficult to imagine life without computer programmers.

The U.S. Department of Labor states that a computer programmer's job is to "convert project specifications and statements of problems and procedures to detailed logical flow charts for coding in computer language. Develop and write computer programs to store, locate, and retrieve specific documents, data and information. May program web sites."

Computer programmers perform tasks that can overlap and are occasionally subordinate to computer software engineers, who create operating systems, and applications programmers who develop, create and modify software or specialized utility programs. In some industries where the line between the occupations is more delineated, an accomplished programmer can advance to software or applications engineer.

A bachelor's degree is the minimum requirement for most entry-level positions. The more programs a programmer works on, the better; building a portfolio is as important in this field as in any other. A programmer collaborates with managerial, engineering, technical personnel and other users to develop new programs, conduct trial runs, make corrections, and see that networks, workstations, CPUs or peripheral equipment respond to the program. Learning programming languages such as COBOL, Prolog, Java and C++ is a requirement. Personal traits such as superior problem solving abilities, communication skills and working well with others are also integral to the job. Only in the movies are computer programmers wild-eyed loners sitting in a recliner in a dank basement furiously writing program that will either save or destroy the world.

In Utah, according to the Department of Workforce Services, this occupation will experience little or no employment growth, but there will be a moderate volume of annual job openings. The need for replacements, rather than from business expansion, is projected to make up the majority of job openings in the coming decade. Prospects are best for degree holders with some experience; strong competition faces those with less formal education or work experience. This occupation is expected to grow by 1.9 percent—about 260 openings annually.

The next time you take a photo with your cell phone, watch a rocket launch from Florida, search for a mate on a web site, or do any of the millions of activities that are based on computer programs, think of the programmer who learned the language, wrote the code and made it all happen. 

## Utah Wages by Occupation, Annual

Title	Inexperienced Wage	Average	Median	Middle Range	Training
Computer Programmer	\$43,580	\$73,030	\$67,200	\$49,940 to \$87,650	Bachelor's Degree
Computer Software Engineer, Applications	\$50,740	\$77,300	\$76,460	\$58,400 to \$94,150	Bachelor's Degree
Computer Soft-Ware Engineer, Systems Software	\$54,030	\$77,150	\$78,130	\$62,990 to \$94,180	Bachelor's Degree

Source: Utah Department of Workforce Services, data from May 2007.